REPORT

OF THE

COMMITTEE ON THE DEVELOPMENT AND UTILIZATION OF NEW AND RENEWABLE SOURCES OF ENERGY

GENERAL ASSEMBLY

OFFICIAL RECORDS: FORTY-FIFTH SESSION

SUPPLEMENT No. 36 (A/45/36)

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I. INTRODUCTION

1. The General Assembly, in paragraphs 1 and 2 of section II of its resolution 37/250 of 21 December 1982, decided to establish an intergovernmental Committee on the Development and Utilization of New and Renewable Sources of Energy, which would be open to the participation of all States as full members, and endorsed the recommendation that representation of Member States in the Committee should be at a high level.

2. In paragraph 3 of section II of the resolution, the General Assembly decided that the Committee would meet once every two years in even years, but that, exceptionally, it would hold its first regular session in the second quarter of 1983.

3. In paragraph 4 of section II of the resolution, the General Assembly decided also that the Committee would submit its report and recommendations to the Assembly through the Economic and Social Council, which may transmit to the Assembly such comments on the reports as it may deem necessary.

II. ORGANIZATIONAL MATTERS

A. Opening and duration of the session

4. The fifth session of the Committee on the Development and Utilization of New and Renewable Sources of Energy was held at United Nations Headquarters from 26 March to 4 April 1990. The Committee held eight meetings (1st to 8th).

5. The session was opened by the Under-Secretary-General for International Economic and Social Affairs.

B. Attendance

6. Representatives of the following States attended the session:

Algeria, Angola, Antigua and Barbuda, Argentina, Austria, Bahamas, Belgium, Bolivia, Brazil, Burkina Faso, Byelorussian Soviet Socialist Republic, Canada, Cape Verde, Chile, China, Colombia, Cuba, Democratic Yemen, Denmark, Djibouti, Ecuador, Fiji, France, German Democratic Republic, Germany, Federal Republic of, Guinea, Guinea-Bissau, Hungary, India, Indonesia, Ireland, Italy, Jamaica, Japan, Kenya, Liberia, Libyan Arab Jamahiriya, Malawi, Malaysia, Mali, Mauritania, Mexico, Mongolia, Morocco, Netherlands, Niger, Norway, Pakistan, Panama, Paraguay, Poland, Republic of Korea, Romania, Saudi Arabia, Sierra Leone, Singapore, Spain, Suriname, Swaziland, Sweden, Switzerland, Tunisia, Turkey, Ukrainian Soviet Socialist Republic, Union of Soviet Socialist Republics, United Kingdom of Great Britain and Northern Ireland, United Republic of Tanzania, United States of America, Venezuela, Yugoslavia and Zambia.

7. The following United Nations organs and bodies were represented:

Economic Commission for Africa

Economic Commission for Western Asia

International Research and Training Institute for the Advancement of Women

United Nations Centre for Human Settlements (Habitat)

United Nations Institute for Training and Research

United Nations Development Programme

United Nations University

8. The following specialized agencies were represented:

Food and Agriculture Organization of the United Nations

United Nations Educational, Scientific and Cultural Organization

World Bank

United Nations Industrial Development Organization

9. The International Atomic Energy Agency was also represented.

10. The following intergovernmental organizations were represented by observers:

Agency for Cultural and Technical Co-operation

Commission of the European Communities

11. The International Chamber of Commerce, a non-governmental organization in consultative status, category I, with the Economic and Social Council, also attended the session.

C. Election of officers

12. At its 1st and 2nd meetings, on 26 and 28 March, the Committee elected by acclamation the following officers:

Chairman: Mr. Sean FITZGERALD (Ireland)

Vice-Chairmen: Mr. Oleg N. PASHKEVICH (Byelorussian Soviet Socialist Republic)
Mrs. Martha DUEÑAS DE WHIST (Ecuador)
Mr. Ashraf QURESHI (Pakistan)

Rapporteur: Mr. Robert GATHUNGU (Kenya)

D. Adoption of the agenda and organization of work

13. At its 1st meeting, on 26 March, the Committee adopted the following agenda, as contained in document A/AC.218/1990/1:

1. Election of officers.

2. Adoption of the agenda and organization of work.

3. Substantive themes selected for discussion:

   (a) Follow-up action on the conclusions and recommendations of the Castel Gandolfo Colloquium of High-level Experts on New and Renewable Sources of Energy;

   (b) Follow-up action on information systems;

   (c) Contribution of new and renewable sources of energy to integrated rural development;

   (d) Direct solar-to-electrical energy conversion;

   (e) Utilization of agricultural residues and urban wastes for energy production.

4. Implementation of the Nairobi Programme of Action for the Development and Utilization of New and Renewable Sources of Energy:

(a) Monitoring the implementation of the Nairobi Programme of Action and the activities of the organs, organizations and bodies of the United Nations system in the field of new and renewable sources of energy;

(b) Recommendation of policy guidelines for different organs, organizations and bodies within the United Nations system with regard to new and renewable sources of energy on the basis of the Nairobi Programme of Action;

(c) Formulation and recommendation of action-oriented plans and programmes for carrying out the Nairobi Programme of Action in accordance with the priorities identified therein;

(d) Promotion of the mobilization of financial resources required in the implementation of the Nairobi Programme of Action;

(e) Inter-agency co-ordination for the implementation of the Nairobi Programme of Action.

5. Consideration of the draft medium-term plan in the field of new and renewable sources of energy.

6. Provisional agenda for the sixth session of the Committee.

7. Adoption of the report of the Committee on its fifth session.

E. Documentation

14. The Committee had before it the following documents:

(a) Provisional agenda (A/AC.218/1990/1);

(b) Report of the Secretary-General on progress achieved in implementing the recommendations of the Castel Gandolfo Colloquium of High-level Experts on New and Renewable Sources of Energy and information systems in the area of new and renewable sources of energy (A/AC.218/1990/2);

(c) Note by the Secretary-General on new and renewable sources of energy and the environment (A/AC.218/1990/3);

(d) Note by the Secretary-General on the contribution of new and renewable sources of energy to integrated rural development, including the utilization of agricultural residues for energy production (A/AC.218/1990/4);

(e) Report of the Secretary-General on activities carried out by entities within the United Nations system concerning the contribution of new and renewable sources of energy to integrated rural development, direct solar-to-electricity energy conversion and the utilization of agricultural residues and urban wastes for energy production (A/AC.218/1990/5);

(f) Report of the Secretary-General on direct solar-to-electrical energy conversion (A/AC.218/1990/6);

(g) Report of the Secretary-General on utilization of urban wastes for energy production (A/AC.218/1990/7);

(h) Report of the Secretary-General on progress achieved in resource mobilization, including consultative meetings, and inter-agency co-ordination (A/AC.218/1990/8);

(i) Report of the Secretary-General on project proposals of entities within the United Nations system and status of their implementation (A/AC.218/1990/9);

(j) Note by the Secretariat on the draft programme on energy, including new and renewable sources of energy, of the medium-term plan for the period 1992-1997 (A/AC.218/1990/CRP.1);

(k) Note by the Secretariat on the status of documentation for the session (A/AC.218/1990/L.1);

(l) Draft organization of work (A/AC.218/1990/L.2);

(m) Draft resolution entitled "The role of women in new and renewable sources of energy" (A/AC.218/1990/L.3);

(n) Draft report of the Committee on its fifth session (A/AC.218/1990/L.4 and Add.1-4);

(o) Draft resolution entitled "Enhancing the activities of the United Nations system to implement the Nairobi Programme of Action for the Development and Utilization of New and Renewable Sources of Energy" submitted by Bolivia on behalf of the States Members of the United Nations that are members of the Group of 77 (A/AC.218/1990/L.5);

(p) Draft resolution entitled "Commemoration of the tenth anniversary of the adoption of the Nairobi Programme of Action for the Development and Utilization of New and Renewable Sources of Energy" submitted by Bolivia on behalf of the States Members of the United Nations that are members of the Group of 77 (A/AC.218/1990/L.6);

(q) Draft conclusions and recommendations submitted by Bolivia on behalf of the States Members of the United Nations that are members of the Group of 77 (A/AC.218/1990/L.7);

(r) Note by the Secretary-General on the draft provisional agenda for the sixth session of the Committee (A/AC.218/1990/L.8).

III. OPENING AND INTRODUCTORY STATEMENTS

15. The Under-Secretary-General for International Economic and Social Affairs opened the fifth session of the Committee on the Development and Utilization of New and Renewable Sources of Energy. In his opening statement, he pointed out that the fifth session was taking place almost 10 years after the adoption of the Nairobi Programme of Action for the Development and Utilization of New and Renewable Sources of Energy 1/ in 1981. Major changes had taken place in the energy situation since then. In the early 1980s, prices had been high. That had generated a strong interest in accelerated development of new and renewable sources of energy, as well as in energy conservation and efficiency of use, particularly in the developed countries. However, following the collapse of oil prices in 1986, energy prices had stabilized at a much lower level and with renewed strength in the world economy, there had been substantial growth in the demand for energy in the developed countries, and at an even faster rate in the developing world. At the same time, interest in new and renewable sources of energy had waned and energy investments had been cut substantially. The situation envisaged in the 1990s would require increased attention to strengthened national and international energy policies and enhanced international co-operation in the area of new and renewable sources of energy. Particular consideration had to be given to energy prospects for developing countries, where energy demand for commercial energy had grown fast in recent years. The Under-Secretary-General said that new and renewable sources of energy could greatly contribute to meeting the growing needs of the developing countries. So far those resources had not been fully exploited, particularly in rural areas where commercial energy continued to play a limited role. However, a number of new and renewable sources of energy technologies had been successfully applied in many developing countries. The contribution of new and renewable sources of energy in the developing countries was high - more than 60 per cent in Africa, for example. There was, therefore, a clear need to intensify national efforts and to strengthen international co-operation to develop and apply new and renewable sources of energy technologies in developing countries. There was also a need for further concerted effort in the implementation of the Nairobi Programme of Action. The Under-Secretary-General thanked the Government of Sweden for funding and acting as host to an expert group meeting on the role of new and renewable sources of energy in integrated rural development. The meeting had been held at Stockholm in January 1990. The report of the meeting would be considered by the Committee.

16. The Chairman said that new and renewable sources of energy were growing in importance and had an important role to play, especially so in the light of the global concern about the environmental impact of the use of conventional sources of energy. New and renewable sources of energy, which were considered environmentally benign, would play an increasing role in meeting future energy needs. It was reassuring that States had shown interest in new and renewable sources of energy. He hoped that there would be a broad exchange of views in the course of the Committee's deliberations.

17. The Under-Secretary-General for Technical Co-operation for Development said that his Department had long been involved in new and renewable sources of energy. Large-scale hydropower, fuelwood and charcoal accounted for most of the contribution made by new and renewable sources of energy. Interest in those sources had declined during the past decade, however, largely as a result of the increased supply and reduced price of oil. He cautioned that that trend would

change in the future as the demand for oil increased. He said that remarkable progress had been made in a number of technologies for harnessing wind, for solar thermal energy and for photovoltaic systems, which had made those sources competitive with conventional sources and thus potentially beneficial to developing countries which had the resources in abundance. He added that most of those resources had the advantage of being environmentally benign and stressed that no United Nations meeting on new and renewable sources of energy should ignore the continuing plight of the majority of the poor who still depended on increasingly scarce supplies of fuelwood, charcoal and animal and crop residues.

18. The Special Co-ordinator for New and Renewable Sources of Energy recalled the factors that had led to the adoption of the Nairobi Programme of Action. They included the high price of oil and the need to help meet the growing energy requirements of rural populations in many developing countries. He said that the current low price had not reduced the importance of new and renewable sources of energy to the majority of the population in rural areas of developing countries, whose needs were virtually divorced from commercial energy supplies. There was increasing concern about the environmental, social and economic consequences of the continuing exploitation and use of fossil energy and, to a lesser extent, of the consumption of fuelwood in rural areas. New and renewable sources of energy could therefore play a greater role. He pointed out that currently there was growing interest in those resources because they were considered relatively benign for the environment, at a time when there was world-wide concern about the long-term environmental implications of the use of conventional energy sources and other public opinion rejected nuclear energy development. He added that, in the long-term, the most promising new and renewable sources of energy (solar, wind, biomass) would play a greater role in the future world energy mix. He reiterated the need to continue the implementation of the Nairobi Programme of Action, with the allocation of further human and financial resources, in particular, through the United Nations Trust Fund for New and Renewable Sources of Energy.

19. The Deputy to the Under-Secretary-General for Technical Co-operation for Development said that the price of oil continued to change in the world market. Such fluctuations continued to present problems for energy planners, suppliers and users. The situation, however, was likely to be short-lived; supplies might soon be tight again. He said that there was already a world-wide revival of interest in new and renwable sources of energy as a result of concern about the environmental impact of conventional and nuclear energy sources. The department continued to execute projects in energy planning, including conservation, solar, wind and biomass energy and mini-hydropower, as well as in conventional sources of energy, with funding from the United Nations Development Programme (UNDP) and voluntary trust funds. The Department had pioneered the promotion of geothermal energy in developing countries for electric power generation and non-electric purposes. The Department had concentrated on establishing reliable systems of information for energy planning and plan execution and had developed software packages for building models to simulate economic and energy systems. In 1987, the Department had convened a workshop on wind energy in Denmark, a symposium on solar energy applications in China and an international seminar on energy conservation in Sweden. It had also collaborated with the Economic and Social Commission for Asia and the Pacific (ESCAP) and with the Economic Commission for Latin America and the Caribbean (ECLAC) in convening regional energy planning workshops in 1989.

20. The representative of the Economic Commission for Africa (ECA) discussed the activities of his organization. He said that the high expectations created during

the United Nations Conference on the Development and Utilization of New and Renewable Sources of Energy about the enormous potential of new and renewable sources of energy had not been fulfilled in Africa, for two main reasons. First, the development and application of new and renewable sources of energy techniques had proved more difficult than expected and the cost remained high. Secondly, national institutions in Africa dealing with the development of new and renewable sources of energy continued to be weak. He said that ECA had played a major role in the establishment of the African Regional Centre for Solar Energy in Burundi. ECA was involved in promoting an integrated rural development policy, of which the development of new and renewable sources of energy was a cornerstone. Member States in Africa had been disappointed about the lack of progress in the mobilization of financial resources for the development and use of new and renewable sources of energy in that region. Although ECA had convened consultative meetings in 1986, potential donors had yet to fund any of the projects proposed. He concurred that programmes on new and renewable sources of energy had gone through many difficult years of under-funding and that that had to be compensated for.

21. The representative of the Food and Agriculture Organization of the United Nations (FAO) said that many problems plagued the developing countries, including foreign debt and sluggish economic activity. The majority of the population in those countries lived in rural areas. More energy was used at a time when energy supplies were decreasing in those areas in the face of a growing population. This led to increased pressure on traditional energy sources. He said that energy requirements in rural areas were high, but there was still no policy framework for meeting them. The efforts of FAO were aimed at assisting developing countries to meet their energy requirements in agriculture and related activities and at improving rural living conditions through more efficient use of all forms of energy. To that end, FAO concentrated on the following priority areas: energy assessment and planning for rural and agricultural areas; fuelwood and charcoal; biomass including biogas; and gasification of agricultural and wood residues; draught animal power; solar energy; wind energy; and people's participation for rural areas with special reference to women.

22. In energy assessment and planning, FAO focused on an integrated approach incorporating energy into rural and agricultural development. The main priority of the fuelwood programme was to develop activities and programmes in fuelwood-deficit areas; other activities were the production of charcoal and wood-based energy for industrial and rural communities. The organic and waste management activities of FAO were closely associated with biogas development. FAO continued to support activities in the gasification of wood and agricultural residues; it had organized a training workshop in China on the design, construction and operation of a rice-husk gasifier. FAO was also involved in a wide range of activities including rural mechanization; application of mature solar and wind energy technologies; monitoring developments in small-scale hydropower systems; equipment for draught animal power; integration of various energy sources; dissemination of information on energy; and technologies for rural and agricultural development.

23. The representative of UNDP said that, when reviewing projects in new and renewable sources of energy submitted for funding by UNDP, under either country or regional indicative planning figures (IPF), UNDP ensured that, to the extent possible, the project aimed at the development of rural areas, that is, the human development dimension, rather than promoting any particular technology. To that end, UNDP stressed that projects in new and renewable sources of energy should, as

far as possible, be end-use-driven rather than technology-driven. Such projects should also ensure that environmental issues, as well as those related to women, were fully addressed. He recalled that over the past 10 years UNDP had funded numerous demonstration projects in new and renewable sources of energy and that what was required were modalities for the dissemination and commercialization of mature and proved technologies. He emphasized that that issue required further attention. UNDP had already initiated measures in that direction in connection with decentralized photovoltaic systems for rural electrification.

24. He recalled that when the Energy Office and Energy Account of UNDP had been created 10 years previously, it had been assumed that additional core funds, as well as trust funds, would be readily available. However, in the past few years, no funds had been forthcoming. Consequently, the Governing Council of UNDP had decided, in 1988, to close the Energy Office and to place the Energy Account (separately) under the United Nations Fund for Science and Technology for Development within UNDP. Core funds were still unavailable and the only activities currently undertaken were financed under trust funds for both conventional and new and renewable sources of energy. A project that recently had become operational was on a feasibility and design study of a mini-hydro programme in Madagascar, funded jointly by the Government of Austria, the OPEC Fund, and the UNDP Energy Account.

25. The representative of the International Research and Training Institute for the Advancement of Women (INSTRAW) stressed the importance of developing new and renewable sources of energy to help to meet the energy requirements of developing countries in the light of the current concern about the environmental impact of the use of conventional energy sources. She said that women were an important factor in the planning, production and use of energy, particularly in rural areas. The position of women in the rural energy system had been largely ignored by energy policy makers, except when new stoves in households were discussed. INSTRAW was playing a major role in assisting in the implementation of the Nairobi Programme of Action. Firstly, it collected, analysed and disseminated information world wide concerning women and energy for use both within and outside the United Nations. Secondly, it helped to identify areas where research and training could make a critical difference in relation to women and energy. Thirdly, it provided assistance to entities within the United Nations system, Governments and non-governmental organizations in integrating issues of relevance to women into energy policies, programmes and projects.

26. In 1988, INSTRAW had prepared, in co-operation with the International Centre for Advanced Technical and Vocational Training (the Turin Centre) of the International Labour Organisation (ILO), prototype multi-media training packages on women and new and renewable sources of energy. It had also prepared a manual entitled "Improved stoves: an integral part of energy strategies". In 1989, INSTRAW had organized, in co-operation with ECA, a regional training seminar on women and new and renewable resources of energy in order to test the above-mentioned training packages. During 1990, INSTRAW was planning a training seminar at the ILO/Turin Centre and two national seminars in the African region during 1990.

27. The representative of the United Nations Institute for Training and Research (UNITAR), discussed the activities of the UNITAR/UNDP Centre on Small Energy Resources, located in Rome. The main objective of the Centre was to assist developing countries in exploiting new and renewable sources of energy and

especially to enable those countries to substitute other forms of energy for fuelwood. The major constraints to the development and use of new and renewable sources of energy included inadequate information and lack of investment in those areas. The Centre had held three conferences, on small-scale oil technologies, geothermal energy, and promotion of photovoltaic systems in Latin America. The Centre was planning a meeting on the promotion of small energy projects in rural Africa in 1991. As part of its activities, the Centre had prepared a number of handbooks and guidebooks on, for example, geothermal prospects and photovoltaic technologies for developing countries. He said that the Centre was in need of continued support to enable it to implement its objectives.

28. The representative of the African Regional Centre for Solar Energy discussed the activities of the Centre. The Centre's programme focused on project implementation to meet the demands of the people. The projects were handled, not from the energy point of view alone, but rather on the basis of total project consideration. The focus was thus mostly on end-use. Most of the projects for the biennium 1990-1991 addressed economic, environmental and health-related issues. He said that the Centre had been established recently and appealed for financial assistance to enable it to implement its proposed programmes.

29. The representative of the Agency for Cultural and Technical Co-operation presented activities of his organization, which focused on French-speaking countries. He highlighted the problems associated with the collection and dissemination of information in French and the need for greater access to data for French-speaking countries. The activities of the Agency included the publication of a liaison bulletin and the convening of conferences and seminars, with special attention given to the development of appropriate energy technologies and training on such subjects as the collection of data on energy. He stressed the importance of adopting training to the real needs of developing countries. He also stressed the position of his organization that the environmental aspect of energy utilization should not be used to impede the economic development of developing countries. He said that the Agency was interested in furthering its co-operation with the United Nations and other entities involved in new and renewable sources of energy.

IV. SUBSTANTIVE THEMES SELECTED FOR DETAILED DISCUSSION

(Agenda item 3)

30. Delegations regretted the delay in the production and distribution of the documents for the fifth session of the Committee. In particular, they were concerned because the substantive themes, owing to their technical nature, should have reached them in good time for appropriate comments by experts at the respective headquarters. They stressed that, in future, the documents should be completed and distributed according to United Nations regulations. However, they complimented the Secretariat on the marked improvement of the quality of the documents, which made the Committee's work much more focused and valuable. In addition to the documents described below, the Committee had before it the report of the Secretary-General on activities carried out by the entities within the United Nations system concerning the contribution of new and renewable sources of energy to integrated rural development, direct solar-to-electricity energy conversion and the utilization of agricultural residues and urban wastes for energy production (A/AC.218/1990/5).

A. Progress achieved in implementing the recommendations of the Castel Gandolfo Colloquium of High-level Experts on New and Renewable Sources of Energy

31. The representative of the United Nations University introduced the first part of the report of the Secretary-General on progress achieved in implementing the recommendations of the Castel Gandolfo Colloquium of High-level Experts on New and Renewable Sources of Energy and information systems in the area of new and renewable sources of energy (A/AC.218/1990/2). He informed the Committee of the steps taken in identifying the actual centres to be included in the network of centres of excellence; the steps included a study of the Consultative Group on International Agricultural Research regarding its experience with agricultural research centres, a specific list of research priorities and regions whose commonalities allowed convenient grouping. These steps had been presented to the Consultative Group on New and Renewable Sources of Energy, which had met in Rome in April 1989. The Consultative Group had concluded that the success of the Consultative Group on International Agricultural Research centres had been due to a number of factors, including high-priority objectives, their clearly defined mandate and mission-oriented strategy and their ability to work on promising technologies. In this context, the Group had considered a number of approaches in relation to the work of the centres of excellence, e.g., the method of their selection, the concentration of their work, their greographical location, areas of priority research, ways in which to ensure their interaction with local authorities, the quality of their outputs, and overseeing the centres. The network would be initiated gradually with three or four centres, which might consist of upgraded existing institutions.

32. The representative of the United Nations University stated that preliminary results indicated that there were over 800 institutions in developing countries with some involvement with new and renewable sources of energy, of which 680 were actually involved in research and development. Twenty-three institutions had been visited by experts and about 100 had been identified as being of sufficient size and orientation to be considered as potential candidates for the network.

Furthermore, new institutions devoted to new and renewable sources of energy were spin-offs of those with more general mandates and their budgets appeared to be increasing as a result of financial support from national Governments. The scope of the research in most institutions was quite broad, which was different from the specialization that characterized agricultural research centres. Among the energy sources, solar energy stood out as the most studied field, with biomass and bioconversion ranking second. A small number of institutions were engaged in basic research, while a large number had had favourable experiences with international networks.

33. Delegations expressed their appreciation to the Government of Italy for funding the study on the feasibility of establishing centres of excellence and to the United Nations University for providing the Group with the relevant information. A number of delegations noted the importance of centres of excellence as a means for the widespread introduction of new and renewable sources of energy to the developing countries. Some delegations commended the effort already undertaken in identifying existing centres that might be included in the proposed networks.

34. One delegation stated that a preliminary activity, involving a few existing centres, should be undertaken to evaluate the effectiveness of the proposed approach; the proposed centres should be involved in patterns of research and development. He added that emphasis should be placed on the training of local personnel, and suggested that the Consultative Group should produce a catalogue on new and renewable sources of energy technologies and sytems; such a catalogue, produced in close co-operation with firms active in the field, should contain technical and economic data, including how and where to obtain the technologies.

35. One delegation stated that there already existed well developed and mature new and renewable sources of energy technologies as a result of the work of innovators and research and development institutions in both industrialized and developing countries. There was, however, a need to disseminate those technologies; the economic, social and cultural factors that limited the success of those technologies should be examined. He added that, instead of establishing new research and development centres, existing ones should be supported. There was a strong case for creating dissemination networks covering areas and technologies not already covered by existing centres, involved in technology adaptation and field testing. Another delegation welcomed the progress made in implementing the recommendations of the Castel Gandolfo Colloquium of High-level Experts on New and Renewable Sources of Energy regarding the establishment of centres of excellence, which was a long-term activity, but wondered whether any action had been taken on short-term activities, including the dissemination of successful technologies and the promotion of joint activities in processing technologies.

B. Follow-up action on information systems

36. The Chief of the New and Renewable Sources of Energy Section of the Department of International Economic and Social Affairs introduced section II of the report of the Secretary-General (A/AC.218/1990/2) dealing with systems of information. He recalled that the report before the fourth session of the Committee had concluded that the issues of information requirements were complex and that in order to assess adequately whether information needs and requirements were being fully met by available information systems, there was a need to evaluate information systems

both within, and even more importantly, outside the United Nations system. Indeed, most of the information systems were outside the United Nations. Such an evaluation would best be undertaken by experts with experience in providing information and in using the information in the field. The Committee, after considering the report, had requested the Secretary-General to convene an ad hoc panel of experts to examine the subject, at no cost to the United Nations.

37. He stated that a number of Governments had been approached regarding the possibilities of funding and acting as host for the ad hoc panel of experts. While Governments had expressed interest in the subject and reiterated its importance, no positive offer to finance the ad hoc panel had been forthcoming. As a result, it had not been possible to convene the ad hoc panel of experts. He added that, meanwhile, consultants had been contacted for the preparation of a comprehensive report that would assess and evaluate available information. They had confirmed the original conclusions of the Secretariat: that the problem was a complex one and would require extensive discussions with providers and users of information, as well as accessing on-line data bases. Such an undertaking would prove to be very costly and no financing was available. A questionnaire had also been sent by the Secretariat to a selected number of information systems active in the field of new and renewable sources of energy. From the responses to the questionnaire and other reports available, a number of observations were made. The report concluded that the responses to the questionnaire did not, in themselves, make it possible to determine whether the needs and requirements of present and potential users were adequately being met. There was therefore still a need for a panel of experts on information systems in the field of new and renewable sources of energy. The panel would help determine, inter alia, the actual requirements of the various types of users and how those requirements should best be met.

38. A number of delegations stressed the importance of information in new and renewable sources of energy in promoting their development and use. Existing information systems dealing with new and renewable sources of energy had, over the years, developed experience in the quality and quantity that users needed for putting those technologies into practice. Requirements varied from region to region and country to country. It was therefore impossible for one single system to satisfy the needs of everyone. What was needed was co-ordination and mutual help in servicing information systems and networks already established at different levels. One delegation emphasized the need for internationally standardized national socio-economic and energy data bases as well as sector-by-sector surveys of energy demand.

39. One representative repeated the offer of his Government, made at the fourth session of the Committee, to act as host to a round-table meeting on the subject in 1991 and 1992. A few delegations described their national information systems dealing with new and renewable sources of energy and reiterated their countries' willingness to co-operate with other systems or information networks, either through physical or electronic access and exchange.

C. Contribution of new and renewable sources of energy to integrated rural development

40. The Chief of the Energy and Resources Branch of the Department of International Economic and Social Affairs introduced the note by the Secretary-General (A/AC.218/1990/4), transmitting the report of the Group of Experts on the

Role of New and Renewable Sources of Energy in Integrated Rural Development, held at Stockholm, in January 1990. The meeting had been organized by the Department in co-operation with the Swedish Agency for Research Co-operation with Developing Countries and the Food and Agriculture Organization of the United Nations. He indicated that the highlights of the discussion at the meeting, as well as the proposals for further action presented in the report, were comprehensive and detailed. He emphasized that much more attention needed to be paid to the social, cultural and political aspects of integrated rural development in the developing countries, primarily at the national level, and by the international community. Patterns of land ownership and wealth, distribution of income, tax burdens and the participation of women require deeper analysis. The role of conventional energy sources in rural areas should not be de-emphasized in favour of new sources unless the latter became cost-effective. There was a need for policies, planning and programmes both for integrated energy development and for integrated rural development. Rural electrification preferably based on local renewable resources was of importance to rural areas. In conclusion, he said that the problem of bringing energy to rural areas was enormous, considering that by the close of the twentieth century more than 2 billion people would have no access to electricity.

41. Many delegations emphasized the importance that their countries placed on the problem of supplying energy to rural areas and commended the Secretary-General on the report. The topic was one that warranted careful follow-up, preferably through increased funding within the United Nations system and through consultative meetings in which United Nations entities, countries, organizations and prospective recipient countries would participate. Even delegations from those countries which were self-sufficient or had abundant conventional energy reserves in their countries said that the problem of rural energy supply in their countries was still very serious. Countries with limited domestic conventional energy sources looked upon new and renewable sources of energy with great hope, especially for helping to meet the requirements of their rural areas.

42. Many delegations emphasized that need for new and renewable sources of energy in rural and remote areas. Many forms of new and renewable sources of energy - including the use of agricultural residues, forest wastes, wind pumping, the solar drying of crops and the production of salts - were already being utilized in those areas and had made significant contributions to agro-industries and in improving the quality of life. Nevertheless, the need for energy continued to be most acute in rural areas where decentralized systems could best be applied.

43. Some delegations described the efforts undertaken in their countries for building up national institutional frameworks to support the implementation of the Nairobi Programme of Action. Some had established research, development and demonstration institutions which concentrated much of their work on dissemination of information on new and renewable sources of energy technologies to rural areas. The importance of strengthening national institutions and capabilities through training of management and administrative skills was emphasized by several delegations.

44. Delegations expressed concern about the continuing dearth of information on the contribution of new and renewable sources of energy to the energy picture. Some delegations noted that when quoting the consumption of new and renewable sources in their countries, non-commercial new and renewable sources of energy, such as fuelwood and in some cases charcoal, were not included, despite the fact that the actual consumption of fuelwood in some cases represented up to two thirds

of energy consumption in rural areas of the same countries. Many delegations affirmed that the demand for fuelwood in many countries exceeded the supply and that that had resulted in ecological disasters and human suffering in rural areas. There was thus increasing concern about finding substitute fuels and increasing the efficient use of the resource. Some delegations identified technologies that seemed to hold great promise for rural areas; they included biogas, solar energy and efficient fuelwood use. One delegation pointed out that fuelwood use in itself was not a cause of deforestation and other ecological problems; efforts should be made to develop sustainable forest management techniques that enabled the development of a forest industry and other income-generating activities for the local population and, at the same time, the provision of biomass energy; the socio-economic benefits of a modern approach to the use of biomass could not be overrated.

45. One representative suggested that attention be focused on three of the proposals for action contained in the report - proposals that he found particularly important. The first related to commercialization of mature new and renewable sources of energy technologies which would significantly depend on their widespread dissemination. In order to achieve successful commercialization of the technologies, private entrepreneurs would have to co-operate with the public sector. Private interests usually required, as a minimum, assurance of the technology's capacity to perform adequately, the existence of a market as well as a maintenance and repair infrastructure. The public sector must in that case underwrite some risk, conduct market studies and provide infrastructure for the effective manufacture of devices. The same representative stated that donors might play a role in supporting the public sector of developing countries in that effort. He concurred with the conclusion of the Group of Experts that a balanced system of taxation and customs policies should be developed in order to correct the wide variations that existed for imported items and that new and renewable sources of energy technologies were usually treated unfavourably. He welcomed the emphasis in the report on the central and crucial role of women, not only in the household sector, but also in the production and distribution of rural energy; if women were not encouraged to be involved in the planning, development, dissemination and use of these resources and technologies, dissemination would not succeed. He emphasized that the Group of Experts had recommended that environmental costs should be incorporated into the assessment of energy project proposals and, furthermore, that new and renewable sources of energy should be incorporated into existing investment and pricing policies in schemes for conventional commercial sources of energy in order to provide the former with an opportunity for fair competition.

46. Another delegation said that of particular importance was the recommendation that an assessment should be made of the environmental impact of new and renewable sources of energy, including local, national and global effects with projections incorporating scenarios of their expanded development and utilization.

D. Direct solar-to-electrical energy conversion

47. The report of the Secretary-General on direct solar-to-electrical energy conversion (A/AC.218/1990/6) was introduced by the Chief of the New and Renewable Sources of Energy Section of the Department of International Economic and Social Affairs. He said that the report was based on a more detailed paper commissioned by the Department. It gave a brief review of photovoltaic systems, including the

most successful applications, current costs and future prospects. Although the capital costs of photovoltaic systems remained higher than those for large-scale energy sources, there had been significant progress in the past 15 to 20 years and the cost of arrays of photovoltaic cells had been dropping steadily. The report contained a summary of the various types of photovoltaic systems, their costs and applications, and a discussion of the relative merits of photovoltaic systems and other small energy systems. Photovoltaic systems could be applied in rural electrification, water pumping and treatment systems, health care systems, communications, transport aids, and security systems. Major effort had gone into water pumps, vaccine refrigeration, lighting and photovoltaic systems for grid connection to existing electricity grid. He said that significant research and development had been undertaken in the early 1980s and, while funding had since decreased in some developed countries, substantial effort was continuing in that field. A number of big projects were being funded in Africa. The world market in photovoltaic systems and strategies for promoting their increased utilization were also discussed in the report. He said that, in addition to industrialized countries, many developing countries had already embarked on manufacturing programmes of different types of photovoltaic cells.

48. Many delegations emphasized the importance of photovoltaic systems, in particular, in remote areas in developing countries. They said that the report provided very useful and highly interesting information. Several delegations said that great attention was being paid to photovoltaic systems in their countries and that increasing large-scale use was hoped for. One delegation noted that there were significant economies of scale in the manufacture of the photovoltaic cells and as a consequence it was not advisable to set up many such facilities in developing countries. Rather, it was of great utility and value to set up facilities for the assembly of photovoltaic systems to meet specific applications, such as water pumps, communications and refrigeration units.

49. A number of countries informed the Committee of the national programmes being undertaken in the field of photovoltaic and related systems.

E. Utilization of agricultural residues and urban wastes for energy production

50. The report of the Secretary-General on utilization of urban wastes for energy production (A/AC.218/1990/7) was introduced by the Chief of the New and Renewable Sources of Energy Section of the Department of International Economic and Social Affairs. He pointed out that the report dealt only with urban wastes since agricultural residues had been dealt with in document A/AC.218/1990/4. He said that the production of energy from urban wastes was receiving increasing interest and that pressure to improve the management of waste disposal was increasing as urban populations continued to increase. The rise in urban populations was particularly marked in developing countries. With increasing urbanization and growth of large cities, waste disposal was becoming a serious problem. Inadequate waste collection and disposal created public health hazards and unacceptable environmental conditions. The report contained a review of the nature of urban or municipal solid waste and factors bearing on their generation, density, moisture content and composition. It was stressed in the report that, while disposal was properly an environmental concern, energy production from waste could provide attractive options to landfills and open dumping. Alternative methods of waste disposal, which was a complex and multidisciplinary process, were reviewed. The

role of recycling was discussed together with combustion processes and bio-conversion technologies. The economic and social aspects of waste-to-energy technologies were also discussed and recommendations were made with particular regard to the situation in developing countries.

51. Several delegations said that the management and disposal of urban wastes were serious problems whose urgency required sustained attention. A few delegations said that the many ways in which waste could be converted into energy provided developing countries with effective alternatives and that the process was another positive aspect of the linkage between new and renewable sources of energy and the environment. One delegation pointed out that the management of urban waste required a sound infrastructure.

V. IMPLEMENTATION OF THE NAIROBI PROGRAMME OF ACTION FOR THE DEVELOPMENT AND UTILIZATION OF NEW AND RENEWABLE SOURCES OF ENERGY

(Agenda item 4)

A. Discussion

52. Delegations reaffirmed the importance and relevance of the Nairobi Programme of Action for the Development and Utilization of New and Renewable Sources of Energy. Many delegations expressed concern at the meagre results so far achieved in accomplishing the goals of the Nairobi Programme of Action and added that much more effort was needed in order to maintain interest in new and renewable sources of energy, considering that the Programme of Action was formulated with long-term views in mind. Delegations stressed the importance of training and exchange of information promoting the implementation of the Nairobi Programme of Action. In this connection, they emphasized the need to strengthen national capacities for meeting energy requirements, facilitating technology transfer, especially regarding energy-efficient technologies, promoting technical co-operation among developing countries and stimulating the mobilization of financial resources. Several delegations noted that, although conventional energy prices had decreased in recent years, that situation was expected to change. For many developing countries, the energy situation was as critical as it had been in 1981; consequently, the same urgency that had existed 10 years ago to provide energy for the development efforts of those countries was still being felt. There was therefore a need for continued support for the Nairobi Programme of Action and a re-emphasis of the role of new and renewable sources of energy, particularly for rural areas in developing countries.

53. A number of delegations stated that efforts should not slacken to promote international and regional co-operation - in particular, co-operation between developed and developing countries that could lead to increasing development and use of new and renewable sources of energy. One delegation noted that commercial energy consumption in developing countries had remained stagnant at approximately 10 per cent of global average consumption owing, in many cases, to adverse economic circumstances, such as debt and insufficient external resources. That situation had a particularly negative impact on rural populations in poor countries.

54. A few delegations said that, while some new and renewable sources of energy technologies were mature and without obstacles to their full utilization, the medium-term impact of new and renewable sources of energy on a global level would be very limited owing to a number of factors, such as lack of infrastructure, cost competitiveness and other marketing factors. A number of delegations stated that, in addition to local manufacturing of new and renewable sources of energy equipment, private sector and non-governmental involvement should be encouraged. Some delegations urged that efforts should be made to promote efficient use of all energy resources, and urged the co-generation of new and renewable sources of energy in agro-forest industries. Replacement of fossil fuels by new and renewable sources of energy, where feasible, should be fostered and continued efforts made to bring the use of new and renewable sources of energy to rural and remote areas where their competitiveness was recognized.

55. Delegations took note of the note by the Secretary-General on new and

renewable sources of energy and the environment (A/AC.218/1990/3), which stressed the important relationship between energy and the environment and the increasingly urgent attention that those problems were receiving from Governments and the public. The adverse impacts resulting from the combustion of fossil fuels, including climatic changes brought about by the atmospheric increase of carbon dioxide and the decrease in the ozone layer from chloro- and fluorocarbons and acid rain, represented a threat to global environmental quality that must be alleviated with concerted action. Delegations noted that new and renewable sources of energy were more environmentally benign; that fact accounted for the renewed interest in new and renewable sources of energy.

56. Many delegations questioned the inclusion of the note by the Secretary-General, which had not been requested by the Committee. One delegation stated that some of the recommendations in the note appeared to be in conflict with those of the Nairobi Programme of Action. One delegation stated that the importance of the Committee had been enhanced because of the link between new and renewable sources of energy and the environment and strongly suggested that the Committee should update its mandate and adapt its means so as to accommodate the role of new and renewable sources of energy in this link of natural resources, energy and the environment.

57. A few delegations cautioned that concern for environmental impacts of commercial energy development and use should not be used to limit energy supplies and thus pose a brake or restriction on the economic development of developing countries. One delegation stated that the problem of the environmental impact of commercial energy use was largely the result of activities in the industrialized countries, and added that those countries should play a major role in reversing environmental degradation. In that context, the delegation stated that energy-efficient technologies would play a crucial role.

58. Some delegations pointed out that the promotion of energy efficiency and conservation would limit the adverse environmental impact of the utilization of conventional energy and that pricing policies would play a role in that regard. A few delegations suggested that ecological cost be included when assessing energy technologies that would favour new and renewable sources of energy. One delegation suggested that the Committee should look at the impact of widespread and large-scale use of new and renewable sources of energy on the environment.

59. Several delegations referred to the United Nations Conference on Environment and Development, scheduled to be held in 1992 in Brazil, and suggested that the role that new and renewable sources of energy could play in reducing environment degradation be discussed at the Conference. A number of delegations stated that the Committee should prepare a contribution on this topic for the Conference. One delegation proposed that the Committee might consider rescheduling its next session for 1991 in order to make a significant contribution to the preparatory work of the Conference.

60. Delegations took note of the report of the Secretary-General on progress achieved in resource mobilization, including consultative meetings, and inter-agency co-ordination (A/AC.218/1990/8). Delegations stated that judicious selection of the substantive themes would serve as adequate policy guidance for the United Nations system in the implementation of the Nairobi Programme of Action. One delegation said that, in addition to the selection of substantive themes for detailed discussion at each of its sessions, the Committee had provided guidance

for implementation of the Nairobi Programme of Action through guidelines for the preparation of projects and programmes as indicated at the first session of the Committee, and through guidelines for the preparation of consultative meetings for mobilization of financial resources, as indicated at the fourth session of the Committee.

61. Many delegations stated that the consultative meetings should be one of the means through which the selected themes should be followed up both by the United Nations system and donors. There had been policy guidelines drawn up by the Committee at its first session on how projects should be formulated, and a selection of projects had been presented in document A/AC.215/5. In that regard, the delegations wondered why no consultative meetings had been convened since 1986. They recalled that consultative meetings had been identified in the Nairobi Programme of Action as being crucial for its implementation. One delegation noted the important role of the Energy Account of UNDP, which was considered a key source of financing for projects and wondered why the status of the Energy Account had changed. One delegation expressed concern that both multilateral and bilateral funding for new and renewable sources of energy projects seemed to have decreased over the past years and stressed the vital role that the United Nations system had played in promoting stronger efforts for funding the projects.

62. Delegations stressed the importance of continuing the efforts of inter-agency co-ordination to implement the Nairobi Programme of Action within the United Nations system.

63. Delegations described national, bilateral and multilateral activities in which their countries had been participating concerning the research, development and use of new and renewable sources of energy and expressed their continuing commitment to do so. Of particular interest were areas in which they considered new and renewable sources of energy to be competitive with conventional sources of energy, such as rural and remote areas. Delegations described efforts to encourage reforestation of farmlands no longer used for food production, in order to produce fuelwood, among other products. One delegation warned that wrongly conducted resources assessment of new and renewable sources of energy, which gave false hopes of exploitable resources, might not serve the cause of those resources at all; methods for actual exploitation potential should also be looked into. A trend for future bilateral assistance would stress energy-efficient technologies and the strengthening of long-term commitments to build up local competence in the management, repair and maintenance of such technologies.

64. Delegations said that the report of the Secretary-General on project proposals of entities within the United Nations system and the status of their implementation (A/AC.218/1990/9) had insufficient statistical coverage, as many more activities were under way in the United Nations system than were covered in the report. Furthermore, project descriptions were too brief. Specific proposals were made to improve the reporting of activities by restructuring the report for the next session in order to provide a basis for an analysis of progress achieved in relation to the Nairobi Programme of Action. One delegation suggested the use of a matrix system in reporting United Nations activities. Another delegation suggested the inclusion of information on successful projects with tangible results and proposed that this kind of information and project proposals should be discussed during the yearly meetings of the Inter-Agency Group on New and Renewable Sources of Energy. Delegations also noted with concern that energy planning and conservation, which were not considered crucial in the Nairobi Programme of Action, represented an increasing share of the activities of the United Nations system.

B. Proposals considered by the Committee at its fifth session

1. Draft resolution A/AC.218/1990/L.3

65. At the 5th meeting, on 30 March, a draft resolution entitled "The role of women in new and renewable sources of energy" was circulated in document A/AC.218/1990/L.3.

66. At its 8th meeting, on 4 April, the Committee agreed to take no action on the draft resolution.

2. Draft resolution A/AC.218/1990/L.5

67. At the 7th meeting, on 3 April, the representative of Bolivia, on behalf of the States Members of the United Nations that are members of the Group of 77, introduced a draft resolution (A/AC.218/1990/L.5) entitled "Enhancing the activities of the United Nations system to implement the Nairobi Programme of Action for the Development and Utilization of New and Renewable Sources of Energy".

68. In introducing the draft resolution, the representative of Bolivia orally corrected operative paragraph 1 (d) by deleting the words "the utilization of" before the words "new and renewable sources of energy".

69. At the 8th meeting, on 4 April, the Secretary of the Committee read out the following revisions to the draft resolution which had been agreed upon during informal consultations:

(a) Operative paragraphs 1 (a), (b), (c) and (d), which had read:

"(a) Contribution to new and renewable sources of energy to decentralized energy systems;

"(b) Role of new and renewable sources of energy in specific multi-purpose medium- to large-scale applications;

"(c) Role of joint ventures in the framework of North-South and South-South co-operation, in the fulfilment of the goals and objectives of the Nairobi Programme of Action;

"(d) Promotion of rapid and effective transfer of technology in the field of the utilization of new and renewable sources of energy to developing countries, with a view to taking due account of their environmental dimension;"

were changed to read:

"(a) Contribution of new and renewable sources of energy to decentralized energy systems and to specific multi-purpose medium- to large-scale applications;

"(b) Promotion of rapid and effective transfer of technology in the field of new and renewable sources of energy to developing countries, including the role of joint ventures in the framework of North-South and

South-South co-operation, in the fulfilment of the goals and objectives of the Nairobi Programme of Action, with a view to taking due account of the potential contribution of those sources to sustainable and environmentally sound development in all countries;"

(b) Operative paragraph 6, which had read:

"Further requests the Secretary-General to prepare, in relation to paragraph 1 (d) above, a comprehensive and analytical study to be considered by the Committee at its sixth session, with a view to contributing to the preparatory process of the United Nations Conference on Environment and Development, and to inform the Preparatory Committee for the Conference accordingly",

was changed to read:

"Further requests the Secretary-General to prepare a comprehensive and analytical study to be considered by the Committee at its sixth session, with a view to providing a significant contribution to the United Nations Conference on Environment and Development, through the Preparatory Committee for the Conference, including recommendations for action to promote rapid and effective transfer of technology in the field of new and renewable sources of energy to developing countries".

70. At the same meeting, the Committee was informed that the draft resolution contained programme budget implications, a written statement of which would be made available to the Economic and Social Council at its second regular session of 1990, when it would consider the report of the Committee.

71. Statements were made by the representatives of France (on behalf of the States Members of the United Nations that are members of the European Economic Community), Colombia, Algeria, Bolivia (on behalf of the States Members of the United Nations that are members of the Group of 77) and Pakistan.

72. The representative of the Office for Programme Planning, Budget and Finance made a statement in response to questions raised.

73. At the same meeting, the Committee adopted draft resolution A/AC.218/1990/L.5, as orally revised (see annex, resolution 1 (V)).

74. After the adoption of the draft resolution, the representative of Algeria made a statement.

75. A statement was also made by the representative of the Office for Programme Planning, Budget and Finance.

3. Draft resolution A/AC.218/1990/L.6

76. At the 7th meeting, on 3 April, the representative of Bolivia, on behalf of the States Members of the United Nations that are members of the Group of 77, introduced a draft resolution (A/AC.218/1990/L.6) entitled "Commemoration of the tenth anniversary of the adoption of the Nairobi Programme of Action for the Development and Utilization of New and Renewable Sources of Energy".

77. At the 8th meeting, on 4 April, the Committee was informed that the draft resolution contained programme budget implications, a written statement of which would be made available to the Economic and Social Council at its second regular session of 1990.

78. At the same meeting, the Committee adopted draft resolution A/AC.218/1990/L.6 (see annex, resolution 2 (V)).

VI. CONSIDERATION OF THE DRAFT MEDIUM-TERM PLAN IN THE FIELD OF NEW AND RENEWABLE SOURCES OF ENERGY

(Agenda item 5)

79. The Chief of the Energy and Resources Branch of the Department of International Economic and Social Affairs pointed out that the section of the draft medium-term plan for the period 1992-1997 contained in document A/AC.218/1990/CRP.1 included programme 23 (Energy, including new and renewable sources of energy) under major programme IV (International economic co-operation for development). The medium-term plan consisted of three subprogrammes in the Department of International Economic and Social Affairs: "Monitoring and analysis of global energy trends and prospects and their impact on development", "Promotion of energy exploration and development in developing countries" and "Furthering the development and use of new and renewable sources of energy". In the Department of Technical Co-operation for Development, the three subprogrammes were "Energy resources assessment and exploration", "Energy planning and management" and "Development and transfer of technology for exploiting critical energy resources". A similar draft had been submitted to the Committee on Natural Resources at its eleventh session, in 1989. Subsequently a letter had been sent to all States Members of the Committee on the Development and Utilization of New and Renewable Sources of Energy requesting their views. Document A/AC.218/1990/CRP.1 incorporated the changes made on the basis of the comments received.

80. Delegations pointed out that the medium-term plan for the period 1984-1989, extended to 1991, had included a major programme on energy with two central programmes, the first being the survey of the energy situation in its international context and promotion of new and renewable sources of energy. Delegations wondered if the change reflected a de-emphasis on activities in new and renewable sources of energy. The Chief of the Energy and Resources Branch explained that the change in the title of the programme had been made by planning authorities to simplify the structure of the medium-term plan by cutting down on the number of programmes and subprogrammes. With regard to the Department of International Economic and Social Affairs, the financial crisis in the United Nations had caused reductions of staff working in the areas of both new and renewable sources of energy and overall energy matters. Unfortunately, that had occurred at the time the Committee on the Development and Utilization of New and Renewable Sources of Energy had embarked on new directions and had requested more reports from the Secretariat on a variety of substantive issues. That had created serious problems, which had become very apparent at the current session of the Committee. He urged the Committee to give serious consideration to the situation when proposing additional activities to be carried out by the Secretariat.

VII. CONCLUSIONS AND RECOMMENDATIONS OF THE COMMITTEE

A/AC.218/1990/L.7

81. At the 7th meeting, on 3 April, the representative of Bolivia, on behalf of the States Members of the United Nations that are members of the Group of 77, introduced draft conclusions and recommendations, contained in document A/AC.218/1990/L.7, which read as follows:

"1. The Committee stressed the importance of the full implementation of the Nairobi Programme of Action for the Development and Utilization of New and Renewable Sources of Energy, with a view to contributing to meet the energy needs of developing and developed countries. The Committee stressed that the implementation of the Programme of Action called for action by all members of the international community, and in that regard the United Nations system had a vital role to play. It also stressed that international co-operation was indispensable in assisting and supporting developing countries' efforts aimed at promoting the development and utilization of new and renewable sources of energy, in accordance with their national plans and priorities.

"2. The Committee reiterated that the implementation of the Nairobi Programme of Action was a long-range effort which should be addressed from a long-term perspective. Therefore, the pace of its implementation should be guided by the needs of the international community, in particular those of the developing countries, and not by perceptions stemming from short-term fluctuations in energy markets.

"3. The Committee felt that that approach was particularly relevant since growth in energy needs of developing countries, combined with growth in demand resulting from recent developments in other regions, was indicative of a trend that might lead to difficulties in the supply of energy, in particular to developing countries, thereby calling for enhanced international co-operation.

"4. The Committee noted with concern that there had been a significant reduction in the level of activities related to the implementation of the Nairobi Programme of Action, and considered that urgent action was required to reverse that unfavourable and undesirable trend.

"5. At its third session, the Committee had decided to select a limited number of substantive items for detailed discussion at each session. The main objective was to focus the deliberations of the Committee, and provide guidance to the United Nations system in preparing the sessions of the Committee and undertaking follow-up action, as well as to the various members of the international community in carrying out activities that would provide valuable inputs to the work of the Committee. However, the Committee felt that that initiative, which had proved fruitful, should remain compatible with the monitoring of the implementation of the Nairobi Programme of Action as a whole, which continued to be one of the basic responsibilities of the Committee. The Committee requested the Secretary-General to submit to it, at its sixth session, a report providing a global view of activities carried out by entities within the United Nations system in implementing the Nairobi Programme of Action.

"6. The Committee reiterated the validity and importance of the conclusions and recommendations contained in the report of the Castel Gandolfo Colloquium of High-level Experts on New and Renewable Sources of Energy, held in October 1987. Such reports referred to short-term as well as long-term options.

"7. The Committee requested the Secretary-General to undertake the implementation of the recommendations of the Castel Gandolfo Colloquium that related to short-term options. In that connection, action would be required in the following areas:

"(a) Identification of successful projects and programmes with a view to promoting their replication;

"(b) Identification of 'threshold' innovations with a view to assisting in their further development and widespread application;

"(c) Promotion and setting up of joint ventures in developing countries aimed at local production of appropriately selected equipment. An intergovernmental group of experts, selected with due regard to equitable geographical representation, should be convened by the Secretary-General before the end of 1991 to identify and recommend appropriate concrete measures.

"The Committee requested the Secretary-General to submit to it, at its sixth session, a report on the implementation of the above recommendation.

"8. With regard to long-term action, the Committee welcomed the progress made by the Consultative Group, established by the Director-General for Development and International Economic Co-operation, in the feasibility study for creating a network of centres of excellence of international scope for new and renewable sources of energy. The Committee felt that while full support should be given to the setting up of an initial network of such centres, provision should be made for setting up centres where they did not exist and enable other centres that had undertaken activities of priority interest for the developing countries in the field of new and renewable sources of energy to benefit from the experience derived in the initial network, through participation in such networks or in secondary networks to be established.

"9. The Committee noted with regret that it had not been possible to convene an ad hoc panel of experts on information systems in the field of new and renewable sources of energy, as recommended by the Committee at its fourth session. The Committee reiterated the importance of decisive action in that regard and requested the Secretary-General to continue his consultations with a view to enlisting the support necessary for convening the panel. The Secretary-General was requested to report to the Committee at its sixth session on the progress made in that regard.

"10. The Committee welcomed the convening of the meeting of the United Nations Group of Experts on the Role of New and Renewable Sources of Energy in Integrated Rural Development, held at Stockholm in January 1990, and endorsed the proposals for further action contained in its report (A/AC.218/1990/4, annex). With a view to undertaking the necessary follow-up action, the Committee requested the Secretary-General to entrust relevant entities within

the United Nations system with the preparation of project and programme proposals aimed at implementing the recommendations contained in the report of the Group of Experts, including the convening of a consultative meeting as indicated in paragraph 16 (a) below.

"11. The Committee took note of the report of the Secretary-General on the utilization of urban wastes for energy production (A/AC.218/1990/7). Even though it provided some background information on the subject, the Committee felt that more work should be done, in particular in areas such as data collection aimed at defining potential options, development of systems suitable for developing country applications, promotion of pilot and demonstration projects in developing countries, and co-ordination of efforts among developing countries so as to minimize duplication and build on previous experience. The Secretary-General was requested to report to the Committee at its sixth session on the progress made.

"12. The Committee took note of the report of the Secretary-General on direct solar-to-electrical energy conversion (A/AC.218/1990/6). It was felt that the reduction in costs of photovoltaic cells might provide room for wider utilization in developing countries. However, the Committee felt that action should be taken in order to assist developing countries in local development of technologies or adaptation of currently available technologies to local conditions, in order to enhance their self-reliance. The Secretary-General was requested to undertake the necessary consultations for identifying the appropriate follow-up action and report to the Committee at its sixth session on progress made.

"13. The implementation of the Nairobi Programme of Action required sustained and continuous efforts by the United Nations system through the preparation and execution of concrete programmes and projects, in accordance with national plans and priorities. To that end, a process of successive generation of project and programme proposals would be required, in the light of the areas for priority action of the Nairobi Programme of Action and taking into account the guidelines for project preparation contained in paragraphs 70-72 of the report of the Committee on its first session. The Secretary-General was requested to prepare for each session of the Committee a report containing new project proposals and an update of existing ones, if required, together with information on the status of implementation of the preceding set of projects and programmes.

"14. The Committee noted with concern that no major developments as regards the mobilization of financial resources had taken place since the fourth session of the Committee. In particular, no consultative meetings had been organized, and mechanisms for financing activities in the field of new and renewable sources of energy, such as the UNDP Energy Account, had lost their capability as a result of the lack of resources.

"15. The Committee stressed that the mobilization of additional and adequate financial resources was essential for the effective implementation of the Nairobi Programme of Action. In this regard, the Committee called for the mobilization of additional resources through the existing financial mechanisms and organizations within the United Nations system for the development and utilization of new and renewable sources of energy. The Secretary-General was requested to report on progress made in that regard at the sixth session of the Committee.

"16. The Committee requested the Secretary-General to undertake the necessary consultations with a view to organizing consultative meetings along the following lines:

"(a) A consultative meeting at the global level centred on the contribution of new and renewable sources of energy to integrated rural development;

"(b) Consultative meetings at the regional level to be organized by the regional commissions, bearing in mind the substantive themes selected for detailed discussion at the fourth and fifth sessions of the Committee, as well as the guidelines provided in paragraphs 72 (5) of the report of the Committee on its fourth session with regard to selection of subjects for the consultative meetings.

"In order to ensure a successful outcome of such meetings as mechanisms for effectively mobilizing financial resources, the Committee recommended that adequate preparations precede the holding of the meetings, including consultations with prospective donors. In addition, it was recommended that a thorough follow-up action be undertaken in order to translate expressions of interest by donors into effective contributions. The Committee requested the Secretary-General to report on the progress made in the implementation of the recommendation at the sixth session of the Committee.

"17. The Committee called for the strengthening of the United Nations Trust Fund for New and Renewable Sources of Energy, established in the office of the Director-General and of the UNDP Energy Account as other important mechanisms for mobilizing financial resources for the development and utilization of new and renewable sources of energy. The Secretary-General was requested to report on progress made in this regard at the sixth session of the Committee.

"18. The development of new and renewable sources of energy would involve numerous types of undertakings, ranging from supporting actions, including national assessment of new and renewable sources of energy for overall energy development, and pre-investment activities, to capital investment in projects and programmes. In addition to the financing of supporting actions and pre-investment activities referred to in the foregoing paragraphs, it was of paramount importance to promote the financing of capital investment in the field of new and renewable sources of energy in developing countries. In that regard, the Committee called upon the international community, in particular developed countries with technological and financial resources, to assist the national efforts of developing countries.

"19. The Committee requested the Secretary-General to inform the Committee at its sixth session of action taken in the field of new and renewable sources of energy pursuant to the provisions of the International Framework of Action for the International Decade for Natural Disaster Reduction, contained in the annex to General Assembly resolution 44/236.

"20. The Committee stressed the importance of effective co-ordination within the United Nations system to avoid overlapping, duplication and inefficient utilization of resources in the implementation of the Nairobi Programme of Action. Accurate and timely information on the activities of the various entities within the United Nations system was fundamental. The Committee

encouraged the Director-General for Development and International Economic Co-operation to continue to make efforts aimed at improving the co-ordination of activities concerning new and renewable sources of energy.

"21. The Committee invited interested Governments and intergovernmental and non-governmental organizations to provide information on their activities in the field of new and renewable sources of energy to the focal point for information in the Department of International Economic and Social Affairs in order to facilitate the exchange of experience and information.

"22. With a view to increasing the effectiveness of its future work, the Committee requested the Secretary-General to undertake the consultations necessary to provide the Committee with high-level technical support aimed at assisting in the substantive preparation of its sessions and in providing advice in carrying out programmes and projects as well as in-depth analyses on the subjects identified for detailed examination at each session of the Committee. The Committee requested the Secretary-General to report at the sixth session of the Committee on the progress made in that regard.

"23. The Committee also requested the Secretary-General to review the secretariat arrangements with a view to strengthening the secretariat support of the Committee and increasing its responsiveness, in particular as regards the preparation of documentation and follow-up of the recommendations of the Committee at each of its sessions."

82. At the 8th meeting, on 4 April, the Committee was informed that the draft conclusions and recommendations contained programme budget implications, a written statement of which would be made available to the Economic and Social Council at its second regular session of 1990.

83. At the same meeting, the representative of France (on behalf of the States Members of the United Nations that are members of the European Economic Community) made a statement.

84. Also at the same meeting, the Secretary of the Committee read out changes to the document which had been agreed upon during informal consultations.

85. Statements were made by the representatives of Colombia, Venezuela, Sweden, Ecuador, the Union of Soviet Socialist Republics, Pakistan, Mongolia, Norway, Ireland (on behalf of the States Members of the United Nations that are members of the European Economic Community) and the United Kingdom of Great Britain and Northern Ireland.

86. The Secretary of the Committee and the representative of the Office for Programme Planning, Budget and Finance responded to questions raised.

87. Following a proposed amendment by the representative of the United States of America, statements were made by the representatives of Algeria, who also amended the proposal made by the representative of the United States of America, Sweden, Ireland (on behalf of the States Members of the United Nations that are members of the European Economic Community), Bolivia (on behalf of the States Members of the United Nations that are members of the Group of 77) and Venezuela.

88. At the same meeting, the Committee adopted the draft conclusions and recommendations contained in document A/AC.218/1990/L.7 which, as orally revised and amended, is set out below:

"1. The Committee stressed the importance of the full implementation of the Nairobi Programme of Action for the Development and Utilization of New and Renewable Sources of Energy, with a view to contributing to meet the energy needs of developing and developed countries. The Committee stressed that the implementation of the Programme of Action called for action by all members of the international community, and in that regard the United Nations system had a vital role to play. It also stressed that international co-operation was indispensable in assisting and supporting developing countries' efforts aimed at promoting the development and utilization of new and renewable sources of energy, in accordance with their national plans and priorities.

"2. The Committee reiterated that the implementation of the Nairobi Programme of Action was a long-range effort which should be addressed from a long-term perspective. Therefore, the pace of its implementation should be guided by the needs of the international community, in particular those of the developing countries, and not by perceptions stemming from short-term fluctuations in energy markets.

"3. The Committee felt that that approach was particularly relevant since growth in energy needs of developing countries, combined with growth in demand resulting from recent developments in other regions, was indicative of a trend that might lead to difficulties in the supply of energy, in particular to developing countries, thereby calling for enhanced international co-operation.

"4. The Committee noted with concern that there had been a significant reduction in the level of activities related to the implementation of the Nairobi Programme of Action, and considered that urgent action was required to reverse that unfavourable and undesirable trend.

"5. At its third session, the Committee had decided to select a limited number of substantive items for detailed discussion at each session. The main objective was to focus the deliberations of the Committee, and provide guidance to the United Nations system in preparing the sessions of the Committee and undertaking follow-up action, as well as to the various members of the international community in carrying out activities that would provide valuable inputs to the work of the Committee. However, the Committee felt that that initiative, which had proved fruitful, should remain compatible with the monitoring of the implementation of the Nairobi Programme of Action as a whole, which continued to be one of the basic responsibilities of the Committee. The Committee requested the Secretary-General to submit to it, at its sixth session, a report providing a global view of activities carried out by entities within the United Nations system in implementing the Nairobi Programme of Action.

"6. The Committee reiterated the validity and importance of the conclusions and recommendations contained in the report of the Castel Gandolfo Colloquium of High-level Experts on New and Renewable Sources of Energy, held in October 1987. Such reports referred to short-term as well as long-term options.

"7. The Committee requested the Secretary-General to undertake through all appropriate means the implementation of the recommendations of the Castel Gandolfo Colloquium that related to short-term options. In that connection, action would be required in the following areas:

"(a) Identification of successful projects and programmes with a view to promoting their replication;

"(b) Identification of 'threshold' innovations with a view to assisting in their further development and widespread application;

"(c) Promotion and setting up of joint ventures in developing countries aimed at local production of appropriately selected equipment. An intergovernmental group of experts, selected with due regard to equitable geographical representation, should be convened by the Secretary-General before the end of 1991 to identify and recommend appropriate concrete measures.

"The Committee requested the Secretary-General to submit to it, at its sixth session, a report on the implementation of the above recommendation.

"8. With regard to long-term action, the Committee welcomed the progress made by the Consultative Group, established by the Director-General for Development and International Economic Co-operation, in the feasibility study for creating a network of centres of excellence of international scope for new and renewable sources of energy. The Committee felt that full support should be given to the setting up of an initial network of such centres. Other centres undertaking activities of priority interest for the developing countries in the field of new and renewable sources of energy according to their national plans, objectives and priorities can benefit from the experience derived in the initial network, through participation in such a network.

"9. The Committee noted with regret that it had not been possible to convene an ad hoc panel of experts on information systems in the field of new and renewable sources of energy, as recommended by the Committee at its fourth session. The Committee reiterated the importance of decisive action in that regard and requested the Secretary-General to continue his consultations with a view to enlisting the support necessary for convening the panel. The Secretary-General was requested to inform the Committee at its sixth session on the progress made in that regard.

"10. The Committee welcomed the convening of the meeting of the United Nations Group of Experts on the Role of New and Renewable Sources of Energy in Integrated Rural Development, held at Stockholm in January 1990, and endorsed the proposals for further action contained in its report (A/AC.218/1990/4, annex). With a view to undertaking the necessary follow-up action, the Committee requested the Secretary-General to entrust relevant entities within the United Nations system with the preparation of project and programme proposals, in accordance with national development plans, objectives and priorities of the developing countries concerned, aimed at implementing the recommendations contained in the report of the Group of Experts.

"11. The Committee took note of the report of the Secretary-General on the utilization of urban wastes for energy production (A/AC.218/1990/7). Even

though it provided some background information on the subject, the Committee felt that more work should be done, in particular in areas such as data collection aimed at defining potential options, development of systems suitable for developing country applications, promotion of pilot and demonstration projects in developing countries, and co-ordination of efforts among developing countries so as to minimize duplication and build on previous experience. The Secretary-General was requested to inform the Committee at its sixth session on the progress made.

"12. The Committee welcomed the report of the Secretary-General on direct solar-to-electrical energy conversion (A/AC.218/1990/6) and recommended the publication of the full report commissioned by the Department of International Economic and Social Affairs for wider dissemination. It was felt that the reduction in costs of photovoltaic cells might provide room for wider utilization in developing countries. However, the Committee felt that action should be taken in order to assist developing countries in local development of technologies or adaptation of currently available technologies to local conditions, in order to enhance their self-reliance. The Secretary-General was requested to undertake the necessary consultations for identifying the appropriate follow-up action and report to the Committee at its sixth session on progress made.

"13. The implementation of the Nairobi Programme of Action required sustained and continuous efforts by the United Nations system through the preparation and execution of concrete programmes and projects, in accordance with national plans and priorities. To that end, a process of successive generation of project and programme proposals would be required, in the light of the areas for priority action of the Nairobi Programme of Action and taking into account the guidelines for project preparation contained in paragraphs 70-72 of the report of the Committee on its first session. The Secretary-General was requested to prepare for each session of the Committee a report containing new project proposals and an update of existing ones, if required, together with information on the status of implementation of the preceding set of projects and programmes.

"14. The Committee noted with concern that no major developments as regards the mobilization of financial resources had taken place since the fourth session of the Committee. In particular, no consultative meetings had been organized, and mechanisms for financing activities in the field of new and renewable sources of energy, such as the UNDP Energy Account, had lost their capability as a result of the lack of resources.

"15. The Committee stressed that the mobilization of additional and adequate financial resources was essential for the effective implementation of the Nairobi Programme of Action. In this regard, the Committee called for the mobilization of additional resources through the existing financial mechanisms and organizations within the United Nations system for the development and utilization of new and renewable sources of energy. The Secretary-General was requested to inform the Committee at its sixth session on progress made in that regard.

"16. The Committee requested the Secretary-General to undertake the necessary consultations with a view to organizing consultative meetings along the following lines:

"(a) A consultative meeting at the global level centred on the contribution of new and renewable sources of energy to integrated rural development taking into account the proposals for further action contained in the report of the Group of Experts on the Role of New and Renewable Sources of Energy in Integrated Rural Development, held at Stockholm in January 1990;

"(b) Consultative meetings at the regional level to be organized by the regional commissions, bearing in mind the substantive themes selected for detailed discussion at the fourth and fifth sessions of the Committee, as well as the guidelines provided in paragraphs 72 (5) of the report of the Committee on its fourth session with regard to selection of subjects for the consultative meetings.

"In order to ensure a successful outcome of such meetings as mechanisms for effectively mobilizing financial resources, the Committee recommended that adequate preparations precede the holding of the meetings, including appropriate preparation of programme and project proposals and consultations with prospective donors. In addition, it was recommended that a thorough follow-up action be undertaken in order to translate expressions of interest by donors into effective contributions. The Committee requested the Secretary-General to report on the progress made in the implementation of the recommendation at the sixth session of the Committee.

"17. The Committee called for the strengthening of the United Nations Trust Fund for New and Renewable Sources of Energy, established in the office of the Director-General and of the UNDP Energy Account as other important mechanisms for mobilizing financial resources for the development and utilization of new and renewable sources of energy. The Secretary-General was requested to inform the Committee at its sixth session on progress made in this regard.

"18. The development of new and renewable sources of energy would involve numerous types of undertakings, ranging from supporting actions, including national assessment of new and renewable sources of energy for overall energy development, and pre-investment activities, to capital investment in projects and programmes. In addition to the financing of supporting actions and pre-investment activities referred to in the foregoing paragraphs, it was of paramount importance to promote the financing of capital investment in the field of new and renewable sources of energy in developing countries. In that regard, the Committee called upon the international community, in particular developed countries with technological and financial resources, to assist the national efforts of developing countries.

"19. The Committee stressed the importance of effective co-ordination within the United Nations system, as well as with relevant non-governmental organizations, to avoid overlapping, duplication and inefficient utilization of resources in the implementation of the Nairobi Programme of Action. Accurate and timely information on the activities of the various entities within the United Nations system was fundamental. The Committee encouraged the Director-General for Development and International Economic Co-operation to continue to make efforts aimed at improving the co-ordination of activities concerning new and renewable sources of energy.

"20. The Committee invited interested Governments and intergovernmental and non-governmental organizations to provide information on their activities in

the field of new and renewable sources of energy to the focal point for information in the Department of International Economic and Social Affairs in order to facilitate the exchange of experience and information.

"21. With a view to increasing the effectiveness of its future work, the Committee requested the Secretary-General to undertake the consultations necessary to provide the Committee with high-level technical support aimed at assisting in the substantive preparation of its sessions and in providing advice in carrying out programmes and projects as well as in-depth analyses on the subjects identified for detailed examination at each session of the Committee. The Committee requested the Secretary-General to inform the Committee at its sixth session on the progress made in that regard.

"22. The Committee also requested the Secretary-General to review the secretariat arrangements with a view to strengthening the secretariat support of the Committee and increasing its responsiveness, in particular as regards the preparation of documentation and follow-up of the recommendations of the Committee at each of its sessions.

"23. The Committee decided that the Secretariat would implement the requests contained herein with existing resources as well as voluntary contributions, if they are forthcoming."

89. After the adoption of the draft conclusions and recommendations, the representative of Ireland (on behalf of the States Members of the United Nations that are members of the European Economic Community) made a statement.

VIII. CONSIDERATION OF THE DRAFT PROVISIONAL AGENDA AND DOCUMENTATION FOR THE SIXTH SESSION OF THE COMMITTEE

90. At its 8th meeting, on 4 April, the Committee approved the provisional agenda and documentation for its sixth session, as revised during the discussion (see annex, decision 1 (V)).

IX. ADOPTION OF THE REPORT OF THE COMMITTEE ON ITS FIFTH SESSION

91. At the same meeting, the Committee adopted the draft report on its fifth session (A/AC.218/1990/L.4 and Add.1-4), as orally revised during the discussion.

Notes

1/ Report of the United Nations Conference on New and Renewable Sources of Energy, Nairobi, 10-21 August 1981 (United Nations publication, Sales No. E.81.I.24), chap. I, sect. A.

ANNEX

Resolutions and decision adopted by the Committee on the Development and Utilization of New and Renewable Sources of Energy at its fifth session

A. Resolutions

1 (V). Enhancing the activities of the United Nations system to implement the Nairobi Programme of Action for the Development and Utilization of New and Renewable Sources of Energy

The Committee on the Development and Utilization of New and Renewable Sources of Energy,

Mindful of General Assembly resolution 40/178 of 17 December 1985 on strengthening the role of the United Nations in the field of international economic, scientific-technological and social co-operation, in which the Assembly stressed the willingness of Member States to strengthen the United Nations system as a framework for constructive dialogue and joint efforts in solving international economic, scientific-technological and social problems, especially problems confronting the developing countries,

Recalling the Nairobi Programme of Action for the Development and Utilization of New and Renewable Sources of Energy, a/

Recalling also General Assembly resolution 41/170 of 5 December 1986, in which the Assembly endorsed the decision of the Committee to adopt a substance-oriented approach for subsequent sessions of the Committee, b/

Recalling further General Assembly resolution 44/228 of 22 December 1989 on the United Nations Conference on Environment and Development,

1. Decides to include in the provisional agenda for its sixth session, for detailed consideration, the themes:

(a) Contribution of new and renewable sources of energy to decentralized energy systems and to specific multi-purpose medium- to large-scale applications;

(b) Promotion of rapid and effective transfer of technology in the field of new and renewable sources of energy to developing countries, including the role of joint ventures in the framework of North-South and South-South co-operation, in the fulfilment of the goals and objectives of the Nairobi Programme of Action, with a

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a/ Report of the United Nations Conference on New and Renewable Sources of Energy, Nairobi, 10-21 August 1981 (United Nations publication, Sales No. E.81.I.24), chap. I, sect. A.

b/ Official Records of the General Assembly, Forty-first Session, Supplement No. 44 (A/41/44), annex, sect. A, resolution 1 (III).

view to taking due account of the potential contribution of those sources to sustainable and environmentally sound development in all countries;

2. Invites interested States to inform the Committee at its sixth session of their ongoing practical and scientific activities and/or evaluations with regard to the selected substantive themes;

3. Invites interested States and organizations of the United Nations system, as well as other interested organizations, to convene, without additional costs for the regular budget of the United Nations, technical and scientific meetings related to the substantive themes that would contribute to their in-depth examination and to inform the Committee at its sixth session of the results of those meetings;

4. Requests the Secretary-General to prepare an analytical report for consideration by the Committee at its sixth session based on an in-depth study of the current stage of achievements in States regarding the selected themes;

5. Also requests the Secretary-General to provide a report for consideration by the Committee at its sixth session on the activities of the United Nations system in that regard in order to facilitate a more effective exchange of information and experience regarding the development and utilization of new and renewable sources of energy;

6. Further requests the Secretary-General to prepare a comprehensive and analytical study to be considered by the Committee at its sixth session, with a view to providing a significant contribution to the United Nations Conference on Environment and Development, through the Preparatory Committee for the Conference, including recommendations for action to promote rapid and effective transfer of technology in the field of new and renewable sources of energy to developing countries.

2 (V). Commemoration of the tenth anniversary of the adoption of the Nairobi Programme of Action for the Development and Utilization of New and Renewable Sources of Energy

The Committee on the Development and Utilization of New and Renewable Sources of Energy,

Recalling the Nairobi Programme of Action for the Development and Utilization of New and Renewable Sources of Energy, a/

Noting that the year 1991 will coincide with the tenth anniversary of the adoption of the Nairobi Programme of Action,

Stressing the importance of this event as a useful opportunity to take stock of the implementation of the Nairobi Programme of Action, with a view to revitalizing it and enhancing the actions of the Committee in this respect,

1. Decides to inscribe the item "Commemoration of the tenth anniversary of the adoption of the Nairobi Programme of Action for the Development and Utilization of New and Renewable Sources of Energy" in the agenda of its sixth session, to be held in 1992;

2. Also decides to convene an intergovernmental expert group in 1991, taking due regard of the principle of equitable geographical representation, to assess and review the process of the implementation of the Nairobi Programme of Action and to make concrete recommendations on all aspects of its implementation, including institutional aspects, with a view to assisting the Committee at its sixth session in the consideration of the above item and to take measures designed to speed up the implementation of the concerted action envisaged in the Nairobi Programme of Action.

B. Decision

1 (V). Provisional agenda and documentation for the sixth session of the Committee on the Development and Utilization of New and Renewable Sources of Energy

At its 8th meeting, on 4 April 1990, the Committee on the Development and Utilization of New and Renewable Sources of Energy approved the provisional agenda and documentation for its sixth session as set out below:

1. Election of officers.

2. Adoption of the agenda and organization of work.

3. Implementation of the Nairobi Programme of Action for the Development and Utilization of New and Renewable Sources of Energy:

   (a) Monitoring the implementation of the Nairobi Programme of Action and the activities of the organs, organizations and bodies of the United Nations system in the field of new and renewable sources of energy;

   (b) Recommendation of policy guidelines for different organs, organizations and bodies within the United Nations system with regard to new and renewable sources of energy on the basis of the Nairobi Programme of Action;

   (c) Formulation and recommendations of action-oriented plans and programmes for carrying out the Nairobi Programme of Action in accordance with priorities identified therein;

   (d) Inter-agency co-ordination for the implementation of the Nairobi Programme of Action;

   (e) Contribution to the 1992 United Nations Conference on Environment and Development.

4. Promotion of the mobilization of financial resources required in the implementation of the Nairobi Programme of Action:

   (a) Existing channels for funding new and renewable sources of energy;

   (b) Progress achieved in mobilizing financial resources through consultative meetings.

5. Substantive themes selected for detailed consideration:

   (a) Contribution of new and renewable sources of energy to decentralized energy systems and to specific multi-purpose medium- to large-scale applications;

   (b) Promotion of rapid and effective transfer of technology in the field of new and renewable sources of energy to developing countries, including the role of joint ventures in the framework of North-South and South-South co-operation, in the fulfilment of the goals and objectives of the Nairobi Programme of Action, with a view to taking due account of the potential contribution of those sources to sustainable and environmentally sound development in all countries.

6. Commemoration of the tenth anniversary of the adoption of the Nairobi Programe of Action for the Development and Utilization of New and Renewable Sources of Energy.

Documentation

1. Report of the Secretary-General based on an in-depth study of the current stage of achievements in States regarding the themes selected for detailed consideration at the sixth session;

2. Report of the Secretary-General on the activities of the United Nations system in the themes selected for detailed consideration at its sixth session;

3. Report of the Secretary-General as a contribution to the United Nations Conference on Environment and Development in 1992, including recommendations for actions to promote rapid and effective transfer of technologies in the field of new and renewable sources of energy to developing countries;

4. Report of the Secretary-General on the activities by the entities within the United Nations system in the field of new and renewable sources of energy, including new project proposals and an update of existing ones, together with information on the status of their implementation;

5. Report of the Secretary-General on progress achieved in the mobilization of financial resources for the implementation of the Nairobi Programme of Action, including consultative meetings, and inter-agency co-ordination in the field of new and renewable sources of energy;

6. Report of the Secretary-General on progress achieved in the follow-up of substantive themes selected for detailed consideration by the Committee at its fourth and fifth sessions.